Alaska Region
**Inventory and Monitoring Program**

# The I&M Outlook

March 2002

**...a newsletter of the Alaska Region Inventory and Monitoring Program**

**In this edition:**



### I&M Overview

*The Inventory and Monitoring program was established in 1992. Its intent is to provide consistent databases of information about our natural resources, including species diversity, distribution and abundance; and to determine the current condition of our resources and how they change over time.*

*Inventories are single- or multi-year finite projects. Vital signs monitoring will involve permanent multi-year programs. Inventory and Monitoring both work under a model of sharing resources and expertise within networks of parks.*

*Parks in the Alaska Region are organized into 4 Networks, CAN, NWAN, SEAN, and SWAN. See page 2 for a list of contacts.*

## Excitement for Eelpouts & Lumpsuckers in Glacier Bay Work

The Marine Fish Inventory in GLBA for Southeast Alaska Network (SEAN) is going well, according to **Mike Litzow** (Co-Principal Investigator, USGS/ABSC), who is heading up the survey with **John Piatt**.

The work is being based off the boat ***Steller*** and is utilizing a number of nets to sample fishes in order to confirm presence/absence of >90% of the species expected to occur in park waters. Less than 30% of the roughly 300 species expected to occur here are considered adequately documented. The goal is to sample as many habitat types as possible this summer and to collect voucher specimens to curate as wet specimens for housing at the University of Alaska Museum up in Fairbanks as well as a yet-to-be-determined facility somewhere here in Southeast.

(cont. on page 3)

## ABSC Crew Completes Bird Inventory Fieldwork in NW Alaska Parks

The first Biological Inventory field work for the I&M Program was finished in June. **Bob Gill**, of the USGS Alaska Biological Science Center, and his crew conducted montaine nesting shorebird surveys in Cape Krusenstern NM and Noatak N Pres.

They report lots of birds and spectacular weather with a little snow to post-hole through. **Lee Tibbitts** reports that they detected 74 species of birds in NOAT and 54 species in CAKR.

(cont. on page 2)

## Central Network Highlights

The Central Alaska Network reports lots of new information from this past field season. Nine species of 17 small mammals that were previously reported as "present or probably present but not vouchered" were captured and vouchered in YUCH.

Ten specimens of the tiny shrew (Sorex yukonicus; previously known in North America from only 6 locations (12 specimens) in Alaska) were captured during the 2001 Small Mammal Inventory fieldwork in the upper Yukon River area of YUCH. Concurrently, 2 tiny shrew specimens were taken from pitfall traps in the Carden Hills/Bray Lake area of WRST. This species was

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## Sara's Corner

(Notes from the Alaska Region)

*We're off to a good start with the Inventory & Monitoring Program in Alaska. Two years ago we began preparations for the Biological Inventories and the Vital Signs Monitoring Program. Much has been accomplished in that time, as you'll see in this newsletter. Existing NPS staff heavily invested their time in the beginning, and continue to do so, to establish the program on firm footing. Staff have been hired to head up the programs within most of the four Alaskan networks, bringing additional perspective and expertise to our efforts.*

*The biological inventories are in progress in all networks. The April 2000 Scoping Meeting identified vascular plants and small mammals as the greatest void in our knowledge of species in Alaska Parks. Marine fish in GLBA was another area needing significant attention. Work on freshwater fish & land birds rounds out the program.*

*We are developing training programs to educate park staff in the use of the information management tools that have been developed for I&M data. We will be developing a standard set of products for the program including a training series for managers, technical and lay audiences.*

*With the inventories in full operational swing we turned our attention to Vital Signs Monitoring. The CAN was the first to receive planning funds. Their efforts have focused on identifying the needs of the network parks & beginning to formulate a monitoring plan.*

*The existing Denali LTEM Program is working closely with the network & will be an integral part of the network's program to develop a fundamental ecological understanding of the ecosystems under NPS stewardship. This understanding will better enable park managers to care for their parks and make informed management decisions.*
*(Sara Wesser is the AK Region Inventory & Monitoring Coordinator)*

## Lake Clark Plant Work Covers New Ground

The first biological inventory work for Southwest Alaska Network occurred in LACL. **Rob Lipkin** (Principal Investigator) and **Anna Jansen** of the Alaska Natural Heritage Program, as well as **Penny Knuckles**, **Eve Laeger** and a longtime volunteer from LACL performed a plant inventory and sampled 45 locations throughout the park by helicopter. 255 different species were collected with over 700 total specimens for verification. Several taxa were previously known to occur, but lacked a vouchered specimen at the UA Museum.

20 species and two varities are new to the Park, and several new locations of rare plants were found. The project accessed under-sampled areas of the Park and filled many geographical and ecological gaps including the LACL coast which was visited for 14 days. Costs for this work was reduced by sharing aircraft with coastal bear studies and archeological field crews. AKNHP is compiling the results into a useable database with location, habitat, and associated plant species.

## More New Faces Around Here!

***Alan Bennett*** *was hired as the I&M Coordinator for SWAN. He is a former NPS employee from KATM. And he thought he was retired...*

***Dorothy Mortenson*** *was brought on as the SWAN Data Manager. She brings many skills from the Alaska Dept. of Natural Resources.*

*The new* ***CAN Data Manager*** *has been named.* ***Doug Wilder*** *has accepted the Fairbanks-based position and will begin work in May.*

**NWAN Bird Work** (cont. from page 1)

In NOAT, the crew documented the presence of 4 of the expected shorebird species (Pacific golden plover, Hudsonian godwit, surfbird, red knot), 2 of the expected waterfowl species (bufflehead, common merganser), 1 of the expected jaegers (pomarine jaeger), and 1 of the expected songbirds (hermit thrush).

In CAKR, they documented the presence of 1 of the expected shorebird species (buff-breasted sandpiper) and 1 of the expected songbird species (hoary redpoll).

The crew included Gill and Tibbetts, **Karen Oakley, Lee Tibbetts, John Pearce, David Ward, Nathan Senner**, and two cooperating Russian scientists, **Maxs Dementiev** and **Pavel Tomkovich**.

**Central Network** (cont. from page 1)

not expected to occur in either park unit and the records represent significant eastward range extensions for this shrew species.

Preliminary perusal of plant specimens collected at Denali National Park during 2001 fieldwork shows that more than 20 new species were documented, and that there is certainty in attaining the goal of documenting 90 percent of the species expected to occur in this Park unit. In addition, more than 40 element occurrences of taxa considered rare by the Alaska Natural Heritage program were documented this summer. These preliminary numbers will very likely rise as final determinations of collections are made through fall 2001.

Slimy Sculpin (Cottus cognatus) and Pacific Lamprey (Lampetra tridentata), 2 freshwater fish species that were "expected but not documented" in WRST, were captured during the Freshwater Fish Inventory effort in 2001.

Water quality work was conducted simultaneously with the WRST fish inventory at 34 of the sample sites. Water quality testing equipment was purchased and field-tested; protocols for data collection were tested.

**Reports, Publications and Presentations:**

· Nigro, D. 2001. Sample allocation for conducting a bird inventory in Yukon-Charley Rivers National Preserve. Presentation at the Alaska Chapter of Boreal Partners in Flight Annual Meeting.

· Swanson, S., M.B. Cook, C. Roland, E. Veach, and J. Burch. 2000. Biological Inventory Study Plan for the Central Alaska Network. National Park Service, Alaska Region. 98 pp.

*Maggie MacCluskie is the Vital Signs Monitoring Coordinator for CAN*

| Network | Name | Position | Parks | Phone |
|---|---|---|---|---|
| **AKSO** Alaska Support Office | Sara Wesser | Regional I&M Coordinator | | (907) 257-2557 |
| **AKSO** | Blain Anderson | I&M Technician | | (907) 257-2488 |
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| **NWAN** Northwest Alaska Network | Tom Heinlein | Inventory Coordinator | BELA/CAKR/GAAR/KOVA/NOAT | (907) 257-2422 |
| **SEAN** Southeast Alaska Network | Lewis Sharman | Network Lead | GLBA/KLGO/SITK | (907) 697-2623 |
| **SWAN** Southwest Alaska Network | Susan Kedzie-Webb | Inventory Coordinator | ALAG/ANIA/KEFJ/LACL/KATM | (907) 257-2634 |
| **SWAN** | Alan Bennett | Network Coordinator | ALAG/ANIA/KEFJ/LACL/KATM | (907) 257-2628 |
| **SWAN** | Dorothy Mortenson | Data Manager | ALAG/ANIA/KEFJ/LACL/KATM | (907) 257-2626 |

**GLBA Fish** (cont. from page 1)
The crew consists of three *Steller* personnel and three BRD personnel aboard the vessel. The project got started at the end of June, and should be finished by mid-August. Next summer they'll be back to sample for another 30 days, mostly in the outer waters with perhaps a few days back in the Bay to complete deep-water and shallow-water bottom trawling and a few mid-water trawls

**Bottom Trawls**
The study plan calls for stratified random sampling of depths and bottom types across park waters. The bottom sampling employs a beam trawl that essentially is dragged across the bottom. Early on a couple nets were lost when they snagged on rocks, so since then they've been focusing on relatively smooth, flat silt bottoms. They hope next year to return with some more "robust" gear and/or methods to better sample the diversity of bottom types.

*"The crew is excited by the potential, since they are aware of few such studies from fjords anywhere. ...And none from Glacier Bay."*

So far this year there have been no big surprises, but they have collected ~30 species, including a number of eelpouts and nine species of flatfishes. They have also collected a personal favorite, the Pacific spiny lumpsucker. The crew is excited by the potential, since there are aware of few such studies from fjords anywhere, and none from Glacier Bay.

**Mid-water Trawls**
The mid-water sampling employs a herring net that is towed through the water. While perhaps not as impressive species diversity-wise as the bottom trawls, the mid-water sets have produced about a dozen species that have typically been dominated by juvenile pollock (no surprises there).

They've also duplicated earlier interesting documentation of myctophids (lanternfish) at relatively shallow depths during the day (normally these fishes are quite deep during the day, migrating toward the surface to feed primarily at night to avoid visual predators).

They've captured several individuals of a deep-water smelt that's poorly described in existing keys - stayed tuned for more on this. Interestingly, their richest (abundance-wise) tows have come from Tarr Inlet. They plan to deploy an Isaacs-Kidd trawl for really deep-water (>250m) sets, and hope to find some interesting species down there.

*For more information on this or other SEAN happenings, contact: Lewis Sharman (SEAN Network Lead/ GLBA), or check the SEAN Network Intranet site at: http://web/rgr/i&m/Networks.htm*

## Denali LTEM Turns Over a Few Rocks

*In July, a number of I&M folks and DENA employees attended a workshop on the biological classification of rivers and streams in Denali and were able to learn about this LTEM (Long-Term Ecological Monitoring) project. The group studied classification rationale, stream ecology, aquatic macro-invertebrates and other species in the park, and field techniques. Thanks to Dr. Alexander Milner for the opportunity to take part in this interesting study.*

*Photo of Kirk Lohman and Susan Boudreau examining the stuff under the rocks in the Savage River.*

*Maggie MacCluskie, the new I&M Network Coordinator, lending the weight of her skills to the Surber Sampler with Dr. Milner.*

*The rest of the rock-turners and bug-scrapers.*

## Ecological Subsections Mapping Project

*The Ecological Subsection Mapping project is finished. These subsections have already been used for inventory stratification of birds in WEAR, and are useful for a variety of landcover, monitoring, and ecological analysis functions. The new ArcView Shapefiles are available on the GIS X:/Drive. They will be incorporated into the GIS Data CDs that are installed at the parks.*

*Descriptions and GIS products have been finished for all parks. Final reports are HTML with representative photos, maps, and detailed descriptions. Mappers include Page Spencer of RBR, Dave Swanson in YUGA, Keith Boggs and Jerry Tande of AKNHP, Torre Jorgeson of ABR Inc., Matt Clark, and Michael Shephard of Tongass NF. For more information, please contact Page Spencer. To get a copy of the reports and/ or shapefiles, contact Blain Anderson.*

## Data Management Tools Update

The Alaska Natural Heritage Program (AKNHP) has completed their task of populating NPSpecies and NRBib with information regarding vertebrate and vascular plants in Alaska's national parks. Some final tasks have to be completed by WASO I&M staff and are summarized in the synopsis below. The remaining final products from the Heritage Program are due February 2002, and include detailed documentation of methods used in the reports.

**The Master On-line NPSpecies** application is now available for National Park Service use. A login name and password are required for access. These databases are available to NPS users via the web. You need to request a login from WASO, and the form with which to do so can be found at: *http://www.nature.nps.gov/im/apps/npspp*. The Ft. Collins/WASO group used the DOI Internet blackout to significanlty improve the Access version of NPSpecies. Major updates include a fully implemented ITIS, and an updated T&E module.

**NPBib - The NPS Natural Resources Bibliography** has a new address: *http://www.nature.nps.gov/nrbib/NPBIBsite.html*
All of the AKNHP updates have gone in as well as the water resources bibliography developed by Lisa Fox and Nancy Deschu. Your NPSpecies login will work for this database, too. The purpose of this bibliography is to help NPS staff and others find all available information about the natural resources of National Park Units.

*"The Inventory and Monitoring Program creates an important foundation for effective, long-term management of natural resources throughout the Service."*

## HELP WANTED

**A TALL ORDER.**

**The Alaska Natural Heritage Program is looking for someone to fill Rob Lipkin's shoes as the Plant Inventory Principal Investigator for the Southwest Alaska Network (SWAN). The SWAN is comprised of Katmai, Lake Clark, Aniakchak, Alagnak and Kenai Fjords.**

**If you know of anyone who may be interested and qualified please call Susan Kedzie-Webb at (907) 257-2634.**

## GPS Units to Lend

The Alaska Region recently purchased three recreational Garmin GPS units for fieldwork, aerial mapping, etc. They've been tested and are ready for short-term loan to I&M-Related projects. Base maps are installed, and they come with a waterproof case.

One of the units also has **DGPS** capabilities and comes with backpack and cool antenna. It is most useful on or near the coast.

*Contact: Blain Anderson*

This is the newsletter of the National Park Service, Alaska Region, Inventory and Monitoring Program. Questions, comments or items for publication, may be sent to:

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## Happenings

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|---|---|
| *March 4* | *CAN Planning Meeting (Teleconference)* |
| *March 12-15* | *Data managers meeting (Las Vegas)* |
| *March 14* | *SWAN Technical Committee (Tentative)* |
| *April 2-3* | *CAN Scoping Meeting (Fairbanks)* |
| *April 4* | *CAN Technical Committee (1/2 Day)* |

## Coming Soon to A Park Near You

**I&M Data Management Training**
Blain Anderson, Susan Kedzie-Webb, and Tom Heinlein all attended the I&M Natural Resource Data Management Workshop. Blain will be travelling to the parks to train NR folks on the use of these new tools and approaches. He will be contacting park managers and others to coordinate training times. Keep watching for more information.

**High Tech News...**
The I&M INTRANET is up and running. Please contact Blain with any suggestions/ comments or things to include. It can be viewed by most Parks by simply typing "web" into the address bar of Internet Explorer. Sorry, but Netscape won't work as well.

For other NPS folks, we are located at: *http://web/rgr/i&m/I&M_index.htm*
If you are logged on to a local area network at any NPS site outside of Alaska; Start Internet Explorer and type in "*165.83.48.21*" for an address. (AIM assures us that this will always work if you have access rights and a connection to the network.)

**Amphibians and Beyond...**
The draft amphibian flashcards have been delivered to the parks. We've been receiving a trickle of frog and toad field-forms all summer. So far, the network with the most sightings is the SEAN with the Coast-Walkers leading the charge. Boreal toads seem to enjoy the beaches there. However, a wood frog was photographed way up at 67° 03' 50" in GAAR by **Adam Liljeblad** and **Maureen Nolan**. Keep up the good work folks!


*The cover of the draft field flashcard set for Alaska's Amphibians.*

***This photo was taken by Jess Grunblatt of the AKSO Landcover Mapping Program while doing verification work at Glacier Bay. While we're not calling it peer review, we are encouraged by the little guys interest.***